



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/009,845	03/27/2002	Lewis Colman	6727/0K097	1219
7278	7590	09/21/2004	EXAMINER	
DARBY & DARBY P.C. P. O. BOX 5257 NEW YORK, NY 10150-5257			COLON, GERMAN	
			ART UNIT	PAPER NUMBER
			2879	

DATE MAILED: 09/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/009,845

**Applicant(s)**

COLMAN, LEWIS

**Examiner**

German Colón

**Art Unit**

2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 29 June 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 March 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Response to Amendment***

1. The Amendment, filed on June 29, 2004, has been entered and acknowledged by the Examiner.
2. Addition of claims 15-17 has been entered.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yatsiv et al. (US 5,300,859) in view of Kaminski et al. (US 4,547,886).

Regarding claims 1 and 10, Yatsiv discloses a method of constructing an electrically excited gas discharge lamp (see Figs. 1, 3 and 4), comprising the steps of:

constructing a lamp envelope;

cleaning said lamp envelope; and

filling said envelope with a gas mixture comprising at least one IR-active gas species (i.e. CO<sub>2</sub>), said gas species being such that said lamp provides an output characteristic of spontaneous emission to a ground state when electrically excited (see at least Col. 2, lines 6-18). Yatsiv is silent regarding the limitation of including a catalytic material within said lamp.

However, in the same field of endeavor, Kaminski discloses a discharge lamp comprising a catalytic material deposited in finely divided form within the lamp envelope in order to reduce arcing between electrodes and loss in optical power, resulting from the decomposition of CO<sub>2</sub> into CO and oxygen (see Col. 1, lines 14-20; and Col. 2, lines 21-25, and 35-37). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the catalytic material of Kaminski in the gas discharge of Yatsiv, with the purpose of reducing arcing between electrodes and loss in optical power, resulting from the decomposition of CO<sub>2</sub> into CO and oxygen.

The Examiner notes that while Kaminski refers to a an IR-laser, instead of an IR-lamp which provides an output characteristic of spontaneous emission to a ground state, the problem of decomposition or dissociation of CO<sub>2</sub> to CO and oxygen is found on both IR-sources, and thus, one of ordinary skill in the art would entertain the idea of using the teachings of Kaminski in an IR-lamp. See at least GB Patent No. 1 591 709 to Webley as evidence of the problem of CO<sub>2</sub> dissociation in IR-discharge lamps.

Regarding claims 2 and 11, Yatsiv-Kaminski discloses the lamp comprising a catalytic material. The recitation "said catalyst is operative to increase spectral stability" has not been given patentable weight because is considered an intended used recitation. It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations.

Regarding claims 3 and 12, Yatsiv-Kaminski discloses the catalytic material disposed within the lamp envelope, but is silent regarding said catalytic material being coated on an inside

Art Unit: 2879

wall of the envelope. However, it has been held that rearranging of parts of an invention involves only routine skills in the art. Thus, it would have been obvious to one having ordinary skills in the art the time the invention was made to coat the catalytic material on an inside wall of the lamp envelope, since rearrangement of parts of an invention is considered within the skills of the art. Further, coating said catalytic material on an inside wall reduces the number of parts of the lamp, and thus, its manufacture costs, since an additional support or member for placing the catalyst is not required.

Referring to claims 4 and 13, Yatsiv-Kaminski discloses the catalytic material consisting of platinum (see '886, Col. 2, line 36).

Referring to claims 5 and 7, claims 5 and 7 are rejected over the reasons stated in the rejection of claim 1.

Referring to claim 6, Yatsiv-Kaminski discloses the claimed invention except for the limitation of "the lamp volume being less than approximately 6 mL". However, it has been held that a change in size is generally recognized as being within the level of ordinary skill in the art. Thus, it would have been obvious to one having ordinary skill in the art to provide a lamp having a volume of 6 mL, since such a modification would have involve a mere change in the size of a component.

Referring to claims 8, 14, 15 and 16, Yatsiv discloses the IR-active gas species being carbon dioxide (see at least Cols. 3 and 4, Examples 1-4).

Regarding claim 9, Yatsiv-Kaminski discloses the claimed invention except for the limitation of "the concentration of carbon dioxide being less than 5%". However, it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the

Art Unit: 2879

optimum or workable ranges involves only routine skill in the art. Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the concentration of carbon dioxide in less than 5%, since it is generally considered to be within the ordinary skill in the art to adjust, vary, select or optimize the numerical parameters or values of any system absent a showing of criticality in a particular recited value.

Regarding claim 17, Yatsiv-Kaminski discloses the lamp comprising a catalytic material and a predetermined carbon dioxide concentration, but is silent regarding the recitation of “said carbon dioxide concentration results in increased absorption curve depth”. However, it is elementary that mere recitation of a newly discovered function or property, inherently possessed by the structure of the prior art, does not cause a claim drawn to distinguish over the prior art. Additionally, where the Patent Office has reason to believe that a functional limitation asserted to be critical for establishing novelty in the claimed subject matter may, in fact, be an inherent characteristic of the prior art, it possesses the authority to require the applicant to prove that the subject matter shown to be in the prior art does not possess the characteristic relied on. Thus, the functional limitation of said carbon dioxide concentration results in increased absorption curve depth is taught by Yatsiv-Kaminski under the principles of functional inherency.

### ***Response to Arguments***

5. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

#### ***Contact Information***

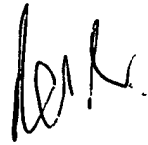
Any inquiry concerning this communication or earlier communications from the examiner should be directed to German Colón whose telephone number is 571-272-2451. The examiner can normally be reached on Monday thru Thursday, from 8:30 to 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on 571-272-2457. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2879

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
gc



NIMESHKUMAR D. PATEL  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800